

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
6 February 2003 (06.02.2003)

PCT

(10) International Publication Number
WO 03/009711 A1

(51) International Patent Classification⁷: **A24D 3/14**

(21) International Application Number: **PCT/KR01/01974**

(22) International Filing Date:
19 November 2001 (19.11.2001)

(25) Filing Language: **English**

(26) Publication Language: **English**

(30) Priority Data:
2001/44433 24 July 2001 (24.07.2001) **KR**

(71) Applicant and

(72) Inventor: **KIM, JinHee** [KR/KR]; 102-19, Amsa 3-dong,
Gangdong-gu, 134-053 Seoul (KR).

(74) Agent: **PARK, HeeJin**; 401, Miele Haus Building,
607-10, Yeoksam-dong, Gangnam-gu, 135-080 Seoul
(KR).

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.

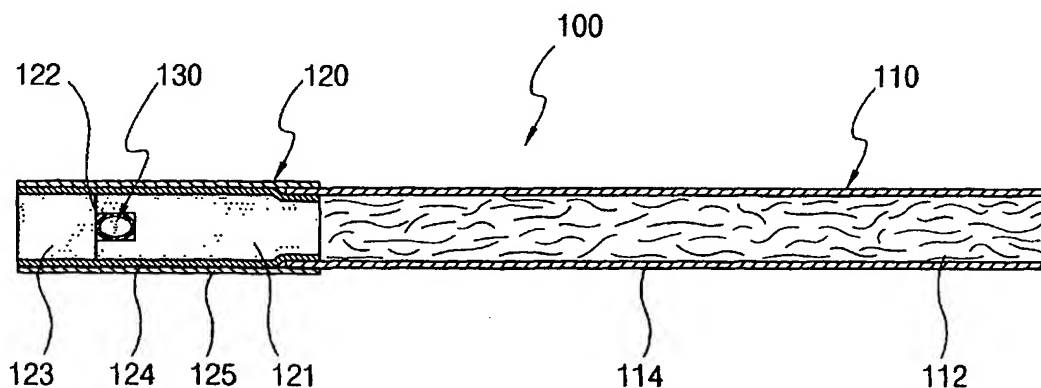
(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: **TASTE CHANGEABLE TOBACCO**



(57) Abstract: Disclosed is a tobacco having a filter. The tobacco has at least one aromatic material capsule disposed in a filter section and filled with aromatic material. When a pressure is applied to the aromatic material capsule, the aromatic material capsule bursts and discharges the aromatic material into the filter so as to change a taste of the tobacco. The tobacco can provide at least two kinds of tobacco tastes according to a smoker's taste, and enables the smoker to change the tobacco taste in the course of smoking. The tobacco containing at least two kinds of aromatic material capsules can provide various, at least four kinds of, tobacco tastes. By diversifying the kinds of the aromatic material capsules, a tobacco having a new taste, which customers want, can be easily developed.

WO 03/009711 A1

TASTE CHANGEABLE TOBACCO

Technical Field

The present invention relates to a tobacco, and more particularly to a
5 tobacco having a filter.

Background Art

In general, a filter cigarette includes a tobacco section and a filter
section. The tobacco section includes minced tobacco leaves and a cigarette
10 paper wrapping the minced tobacco leaves. The filter section includes a filter
connected to the tobacco section, so as to filter off harmful components in
smoke generated from the burning tobacco leaves, and a filter wrapper
surrounding the filter. In relation to the above construction, a general tobacco
will be described hereinafter with reference to the accompanying drawings.

15 FIGs. 1 and 2 are respectively an exploded perspective view of, and a
sectional view of, a general filter cigarette for describing the construction
thereof.

As shown in FIGs. 1 and 2, a filter cigarette 10 includes a tobacco
section 11 and a filter section 16. The tobacco section 11 includes a tobacco
20 leaf filler 12 containing minced tobacco leaves and a cigarette paper 13
surrounding the tobacco leaf filler 12. The filter section 16 includes a filter 17
and a filter wrapper 18. The filter 17 is connected to the tobacco section 11, so
as to filter off harmful components in smoke generated from the burning
tobacco leaves 12. The filter wrapper 18 surrounds the filter 17 while a portion
25 of the filter wrapper 18 overlaps the cigarette paper 13. In some cases, the
filter cigarette 10 may further include a plug wrap 19, disposed between the
filter 17 and the filter wrapper 18, which provides stiffness for the filter section

16 and makes the filter section 16 be resistant to water.

In other words, when the tobacco leaf filler 12 is lighted and is then smoked, the smoke generated while the tobacco leaf filler 12 burns comes into a smoker's mouth after a portion of the harmful components in the smoke are
5 filtered by the filter 17. At that time, the smoker feels a specific taste of the smoke coming into the smoker's mouth.

As described above, the smoker who smokes the conventional tobacco 10 can have only one taste according to the kind of, and the processed state of, the tobacco leaf filler 12.

10

Disclosure of the Invention

Therefore, the present invention has been made in view of the above-mentioned problems, and it is an object of the present invention to provide a tobacco, by which not only its taste can be changed according to a smoker's
15 choice but also the performance of a cigarette filter can be improved in some cases.

In order to achieve the above object of the present invention, there is provided a tobacco comprising: a tobacco section including tobacco leaves which generate tobacco smoke when burnt and a cigarette wrapper in which the
20 tobacco leaves are wrapped; and a filter section including a filter, connected to the tobacco section, for filtering off harmful components of the tobacco smoke generated from the tobacco section, and a filter wrapper in which the filter is wrapped, wherein the filter section is disposed with at least one aromatic material capsule, filled with aromatic material, which bursts when a pressure is
25 applied thereto and so discharges the aromatic material into the filter as to change a taste of the tobacco.

It is preferred that the filter section comprises a first filter and a second

filter, the first filter being wrapped in the filter wrapper and having a capsule receiving recess formed at one end thereof, and the second filter being disposed near to the first filter and covering the capsule receiving recess which contains a first aromatic material capsule.

5 The tobacco may further comprise a third filter and a second aromatic material capsule, the third filter being disposed at an opposite side of the second filter and having an identical shape with the first filter, and the second aromatic material capsule being received in a capsule receiving recess of the third filter.

10 And also, in the tobacco, a plurality of aromatic material capsules may be distributed in the filter.

 According to another aspect of the invention, the filter section may comprise a fourth filter and a pair of second filters, the fourth filter being wrapped in the wrapping paper and having a through hole, the second filters
15 being respectively disposed near to both sides of the fourth filter to cover the through hole, and the through hole containing the aromatic material capsule.

 The aromatic material capsule may comprise a hard empty capsule and the aromatic material contained in the hard empty capsule. The aromatic material may take any of such types as powder, fine particles, relatively large
20 particles, solid, and liquid.

 And also, a proper aroma selected from a balloon flower, Ginseng, peppermint, and coffee may be employed for the aroma of the aromatic material according to customer's tastes.

 According to another aspect of the invention, the aromatic material
25 capsule may comprise a soft capsule and the aromatic material contained in the soft capsule.

Brief Description of the Drawings

The foregoing and other objects, features and advantages of the present invention will become more apparent from the following detailed description when taken in conjunction with the accompanying drawings in
5 which:

FIG. 1 is an exploded perspective view of a general filter cigarette for describing the construction thereof;

FIG. 2 is a sectional view of a general filter cigarette for describing the construction thereof;

10 FIG. 3 is a sectional view of a tobacco according to one embodiment of the present invention;

FIG. 4 is a sectional view showing a modification of the tobacco shown in FIG. 3;

15 FIG. 5 is a sectional view showing another modification of the tobacco shown in FIG. 3;

FIG. 6 is a sectional view of a tobacco according to the present invention;

FIG. 7 is a sectional view of a tobacco according to a further embodiment of the present invention;

20 FIG. 8 is a sectional view of an aromatic material capsule according to one embodiment of the present invention; and

FIG. 9 is a sectional view of an aromatic material capsule according to another embodiment of the present invention.

25 Best Mode for Carrying Out the Invention

Reference will now be made in detail to the preferred embodiments of the present invention.

FIG. 3 is a sectional view of a tobacco according to one embodiment of the present invention.

Referring to FIG. 3, a tobacco 100 according to the present invention includes a tobacco section 110, a filter section 120, and an aromatic material capsule 130 disposed in the filter section 120.

As shown, the tobacco section 110 includes a tobacco leaf filler 112 consisting of minced tobacco leaves and a cigarette paper 114 surrounding and protecting the tobacco leaf filler 112, in the same manner as the conventional filter cigarette does.

The filter section 120 is attached to one end of the tobacco section 110. The filter section 120 includes a first filter 121 having a capsule receiving recess 122 formed at one end of the first filter 121, and a second filter 123 disposed near to the first filter 121 so as to cover the capsule receiving recess 122. The first filter 121 and the second filter 123 are wrapped by a plug wrap 124 which is wrapped in a filter wrapper 125.

As shown, the aromatic material capsule 130 of the tobacco 100 according to the present invention is received in the capsule receiving recess 122 of the first filter 121. The aromatic material capsule 130 includes a soft capsule or a hard empty capsule made mainly from gelatin or cellulose, and aromatic material filled in the capsule. A more detailed description about the construction of the aromatic material capsule 130 will be described later in this specification with reference to FIGs. 8 and 9.

The hard empty capsule may be formed in the form of a composition capsule, which is formed by properly blending gelatin as a main material with purified water together with a dye, a pigment, an opacifier and a plasticizer such as glycerine and sorbitol, or by properly blending cellulose as a main material with gellan gum, a sodium citrate, a plasticizer, an emulsifier, and purified water.

Thereafter, the aromatic material is filled in the capsule, which is then sealed, so that a hard aromatic material capsule is completed. Meanwhile, when the soft capsule is formed, the aromatic material is filled between two folds of capsule bases having an increased plasticity by adding the plasticizer such as glycerin and sorbitol to gelatin, and then they are compressed by a proper molding. In this case, since the aromatic material is filled before the process of compression molding, the aromatic material capsule is completed simultaneously when the soft capsule is molded.

Such an aromatic material capsule has to be breakable at a certain pressure by the smoker's hands or teeth.

In manufacturing the capsules, utilized can be already-known technologies, including those disclosed in Korean patent laid-open publication no. 1999-31274 entitled "Composition for coating a chewable soft capsule" and Korean patent laid-open publication no. 2000-52283 entitled "Vegetable hard empty capsule and a manufacturing method thereof".

For example, in forming the hard empty capsule, cellulose of 18 to 22 weight % may be employed as the main material, which is blended with gellan gum of 0.8 to 1.2 weight % and a sodium citrate of 0.05 to 0.1 weight % which are viscosity stabilizers, glycerin of 0.01 to 0.05 weight % which is a plasticizer, sucrose fatty acid ester of 0.01 to 0.05 weight % which is an emulsifier, and purified water of 76.15 to 81.04 weight %.

In forming the soft capsule, employed may a blend of starch of 5 to 30 weight %, gelatin of 15 to 35 weight %, a plasticizer of 20 to 45 weight %, and purified water of 10 to 40 weight %.

It goes without saying that the aromatic material may take any of such types as powder, fine particles, relatively large particles, solid, and liquid. And also, a proper aroma selected from a balloon flower, Ginseng, peppermint, and

coffee may be employed for the aroma of the aromatic material according to customer's tastes.

As shown in FIG. 3, once the tobacco 100 is lighted and smoked, the tobacco leaf filler 112 burns to generate tobacco smoke, which comes into the smoker's mouth through the filter section 120. In consequence, the smoker feels a tobacco taste according to the tobacco smoke. When the smoker wants to change the tobacco taste while he or she is smoking, the smoker can bite a predetermined portion of the filter section 120 by the teeth, so as to break the aromatic material capsule 130. As a result, the aromatic material contained in the aromatic material capsule 130 permeates into the first filter 121 and the second filter 123. In this state, if the tobacco is smoked again, the aroma of the aromatic material is mixed with the tobacco smoke while the tobacco smoke passes through the filter section 120, and the aroma entrained in the tobacco smoke comes into the smoker's mouth. That is, the tobacco according to the present invention enables the smoker to change the tobacco taste out of necessity. Of course, the smoker can smoke the tobacco after breaking the aromatic material capsule 130 in advance by the hands or by the teeth.

FIG. 4 is a sectional view showing a modification of the tobacco shown in FIG. 3.

Referring to FIG. 4, the tobacco 100 according to the present embodiment includes a plurality of aromatic material capsules 130a, each of which is in the form of a micro-capsule, contained in the capsule receiving recess 122 of the first filter 121. Other constructions of the tobacco according to the present embodiment are the same as those of the tobacco shown in FIG. 3.

FIG. 5 is a sectional view showing another modification of the tobacco

shown in FIG. 3.

Referring to FIG. 5, in the tobacco 100 of the present embodiment, a third filter 123a having a shape identical with that of the first filter 121 is disposed at the opposite side of the second filter 123, and a first aromatic material capsule 130b is received in the capsule receiving recess 122 of the first filter 121 while a second aromatic material capsule 130c is received in a capsule receiving recess 122a of the third filter 123a, so that the smoker can select various tobacco tastes when he or she smokes. That is, the smoker can smoke the tobacco without breaking both first and second aromatic material capsules 130b and 130c, or with breaking only the first aromatic material capsule 130b or the second aromatic material capsule 130c, or with breaking both first and second aromatic material capsules 130b and 130c. Therefore, the smoker can have five kinds of tastes from the tobacco according to the present embodiment. Other constructions of the tobacco according to the present embodiment are the same as those of the tobacco shown in FIG. 3.

FIG. 6 is a sectional view of a tobacco according to another embodiment of the present invention.

In the tobacco 100 of the present embodiment as shown in FIG. 6, the aromatic material capsules 130a, each of which is in the form of the micro-capsule as in FIG. 4, are uniformly distributed in the entire inner filter 120a of the filter section 120. In this case, the intensity of the tobacco taste by the aromatic material can be controlled by adjusting the number of the aromatic material capsules 130a to be broken. Other constructions of the tobacco according to the present embodiment are the same as those of the tobacco shown in FIG. 3.

FIG. 7 is a sectional view of a tobacco according to a further embodiment of the present invention.

Referring to FIG. 7, in the filter section 120 of the tobacco 100 of the present embodiment, a fourth filter 126 having a through hole 127 is disposed between two second filters 123, and an aromatic material capsule 130 is inserted in the through hole 127. Other constructions of the tobacco according to the present embodiment are the same as those of the tobacco shown in FIG. 3.

FIG. 8 is a sectional view of an aromatic material capsule according to one embodiment of the present invention.

Referring to FIG. 8, the aromatic material capsule 130d includes a capsule body 134 having a transverse groove 132 and a longitudinal groove 133 formed near to an upper end of an outer surface thereof, which are respectively concave inward, a capsule lid 136 having a transverse protuberance (not shown) and a longitudinal protuberance 137, which are respectively corresponding to the transverse groove 132 and the longitudinal groove 133 and protrude inward, and an aromatic material 139 filled in the aromatic material capsule 130d. As described above, in forming the aromatic material capsule 130d, firstly formed may be a hard empty capsule 131 in the form of a composition capsule, which is formed by properly blending gelatin as a main material with purified water together with a dye, a pigment, an opacifier and a plasticizer such as glycerine and sorbitol, or by properly blending cellulose as a main material with gellan gum, a sodium citrate, a plasticizer, an emulsifier, and purified water. Thereafter, the aromatic material 139 is filled in the capsule body 134 of the hard empty capsule 131, and the capsule lid 136 is put on the capsule body 134. Then, the formation of the aromatic material capsule 130d is completed. Of course, the aromatic material capsule 130d may be formed according to other methods not mentioned above.

As the aromatic material, employed may be powder having a proper

aroma selected from a balloon flower, Ginseng, peppermint, and grape, or a mixture of the powder with a mixed solution of honey and purified water. Otherwise, also employed may be fine particles produced from dough, which is made by kneading the powder having a predetermined aroma.

5 FIG. 9 is a sectional view of an aromatic material capsule according to another embodiment of the present invention.

Referring to FIG. 9, the aromatic material capsule 130 includes a seamless soft capsule 138 and the aromatic material 139 filled in the soft capsule 138. As described above, in forming the soft aromatic material capsule 130, aromatic material is filled between two folds of capsule bases having an increased plasticity by adding the plasticizer such as glycerin and sorbitol to gelatin, and then they are compressed by a proper molding. It goes without saying that the aromatic material capsule 130 may also be formed according to other methods not mentioned above.

15 And also in this case, a powder type, a liquid type, and a type of fine particles may be employed as the aromatic material 139.

Industrial Applicability

As apparent from the foregoing description, the tobacco according to the present invention can provide at least two kinds of tobacco tastes according to the smoker's tastes.

That is, in the case of enjoying the tobacco according to the present invention, a smoker can not only select in advance one kind of tobacco taste he or she wants before smoking, but also change the tobacco taste in the course of smoking.

Further, the tobacco containing at least two kinds of aromatic material capsules can provide various, at least four kinds of, tobacco tastes.

Moreover, the present invention enables a tobacco having a new taste, which customers want, to be easily developed by diversifying the kinds of the aromatic material capsules.

In the case of employing liquid aromatic material, there is provided a
5 further advantage that the performance of the filter is improved when the liquid aromatic material permeates into the filter after the aromatic material capsule is broken.

While this invention has been described in connection with what are presently considered to be the most practical and preferred embodiments, it is
10 to be understood that the invention is not limited to the disclosed embodiments and the drawings, but, on the contrary, it is intended to cover various modifications and variations within the spirit and scope of the appended claims.

CLAIMS

1. A tobacco comprising:

5 a tobacco section including tobacco leaves which generate tobacco smoke when burnt and a cigarette wrapper in which the tobacco leaves are wrapped; and

a filter section including a filter, connected to the tobacco section, for filtering off harmful components of the tobacco smoke generated from the tobacco section, and a filter wrapper in which the filter is wrapped,

10 wherein the filter section is disposed with at least one aromatic material capsule, filled with aromatic material, which bursts when a pressure is applied thereto and so discharges the aromatic material into the filter as to change a taste of the tobacco.

15 2. The tobacco as claimed in claim 1, wherein the filter section comprises a first filter and a second filter, the first filter being wrapped in the filter wrapper and having a capsule receiving recess formed at one end thereof, and the second filter being disposed near to the first filter and covering the capsule receiving recess which contains a first aromatic material capsule.

20 3. The tobacco as claimed in claim 2, further comprising a third filter and a second aromatic material capsule, the third filter being disposed at an opposite side of the second filter and having an identical shape with the first filter, and the second aromatic material capsule being received in a capsule receiving recess of the third filter.

4. The tobacco as claimed in claim 1, wherein a plurality of aromatic

material capsules are distributed in the filter.

5 5. The tobacco as claimed in claim 1, wherein the filter section comprises a fourth filter and a pair of second filters, the fourth filter being wrapped in the wrapping paper and having a through hole, the second filters being respectively disposed near to both sides of the fourth filter to cover the through hole, and the through hole containing the aromatic material capsule.

10 6. The tobacco as claimed in any of claims 1 to 5, wherein the aromatic material capsule comprises a hard empty capsule and the aromatic material contained in the hard empty capsule.

15 7. The tobacco as claimed in any of claims 1 to 5, wherein the aromatic material capsule comprises a soft capsule and the aromatic material contained in the soft capsule.

FIG. 2

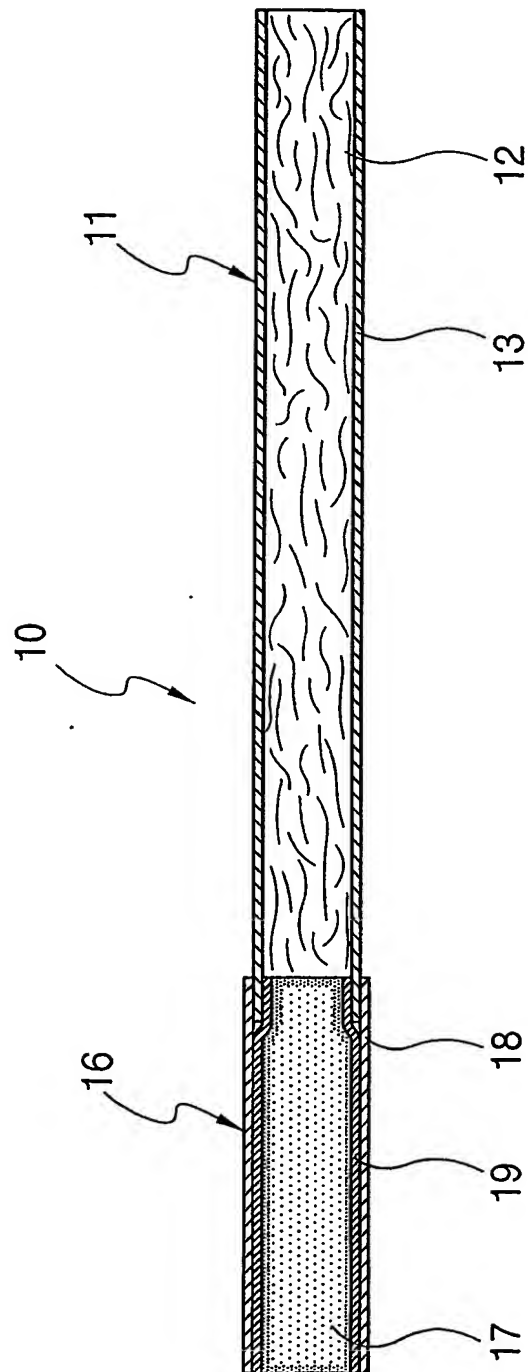


FIG. 3

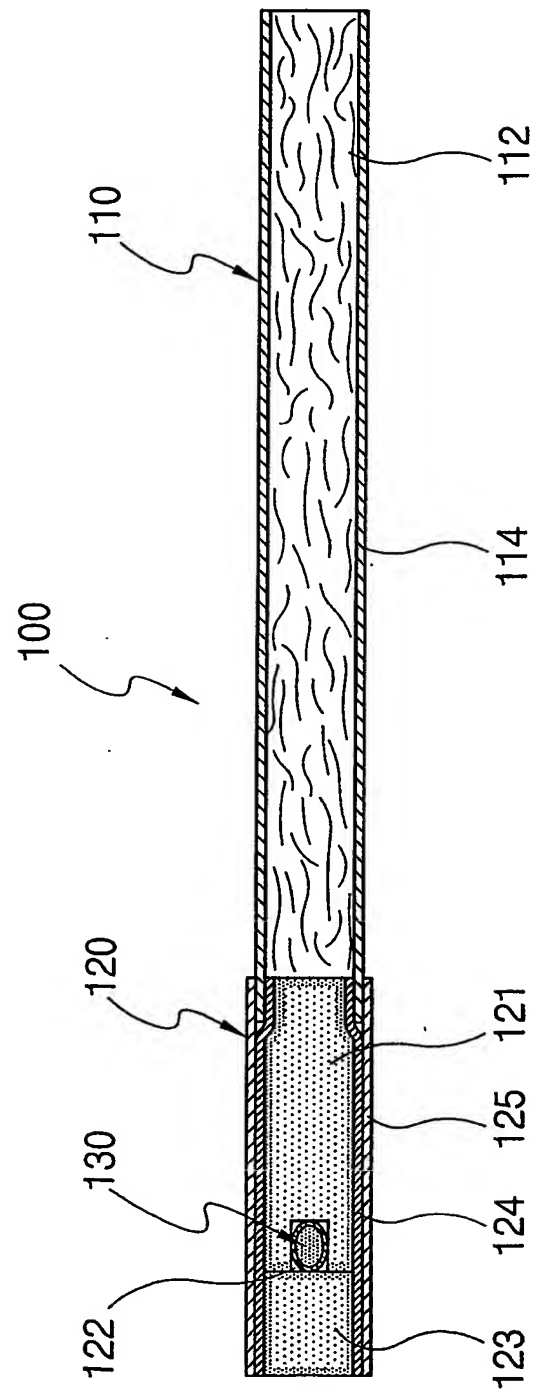


FIG. 4

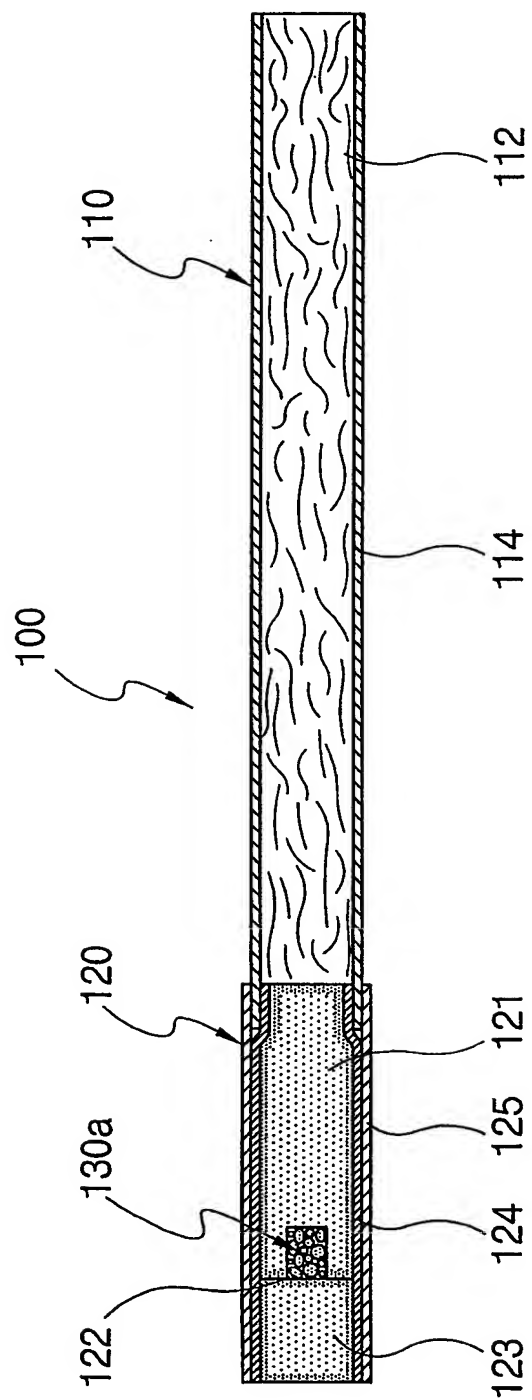


FIG. 5

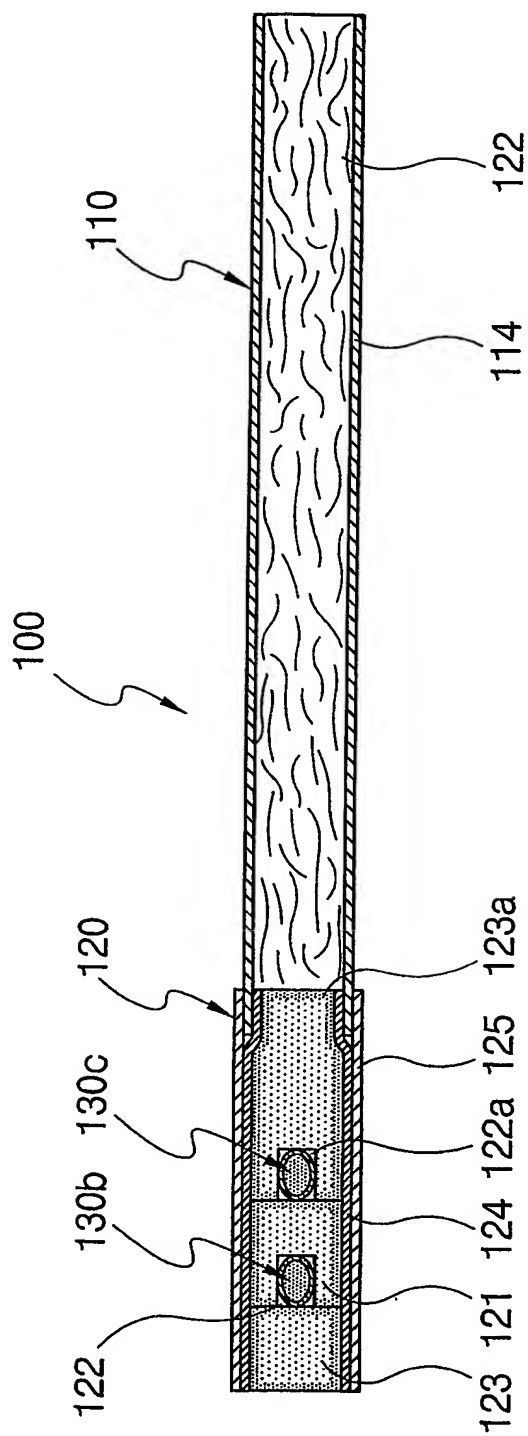


FIG. 6

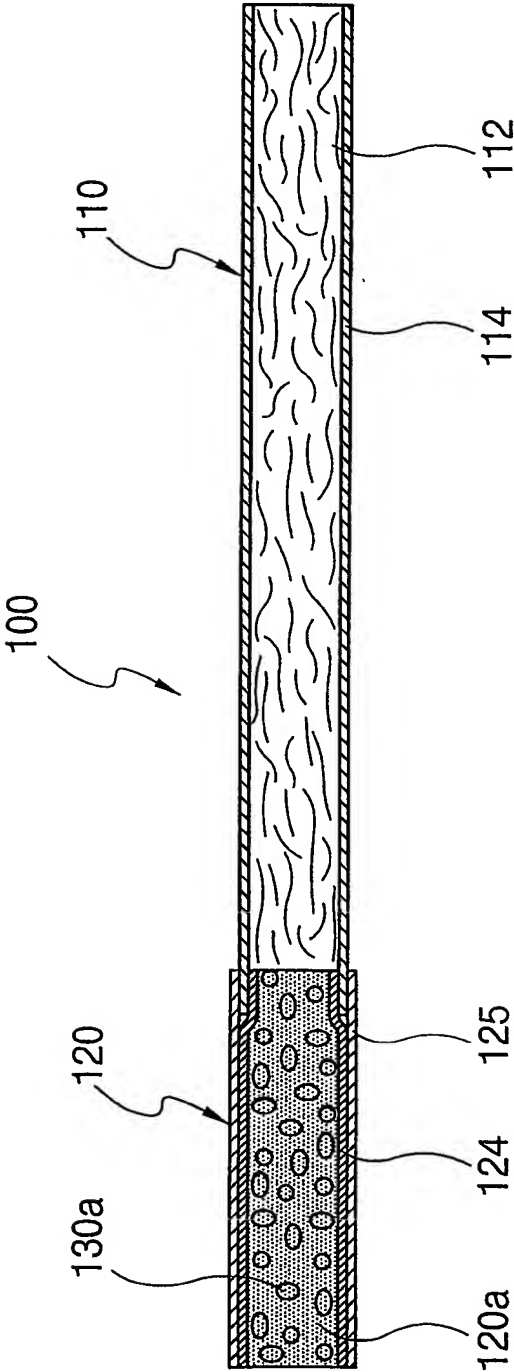


FIG. 7

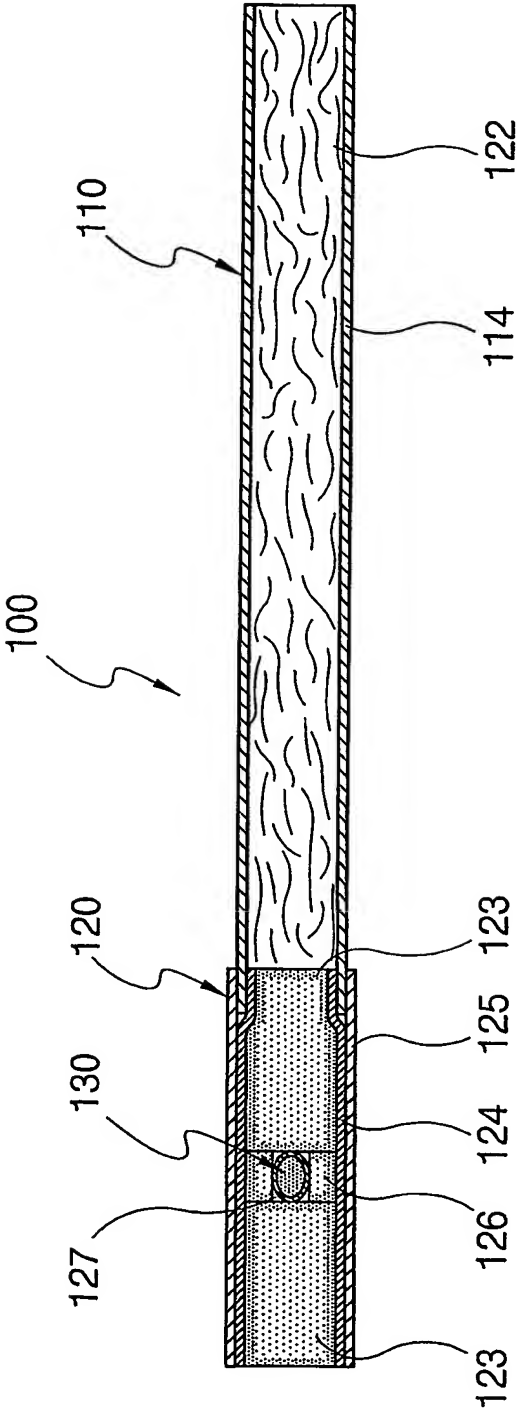


FIG. 8

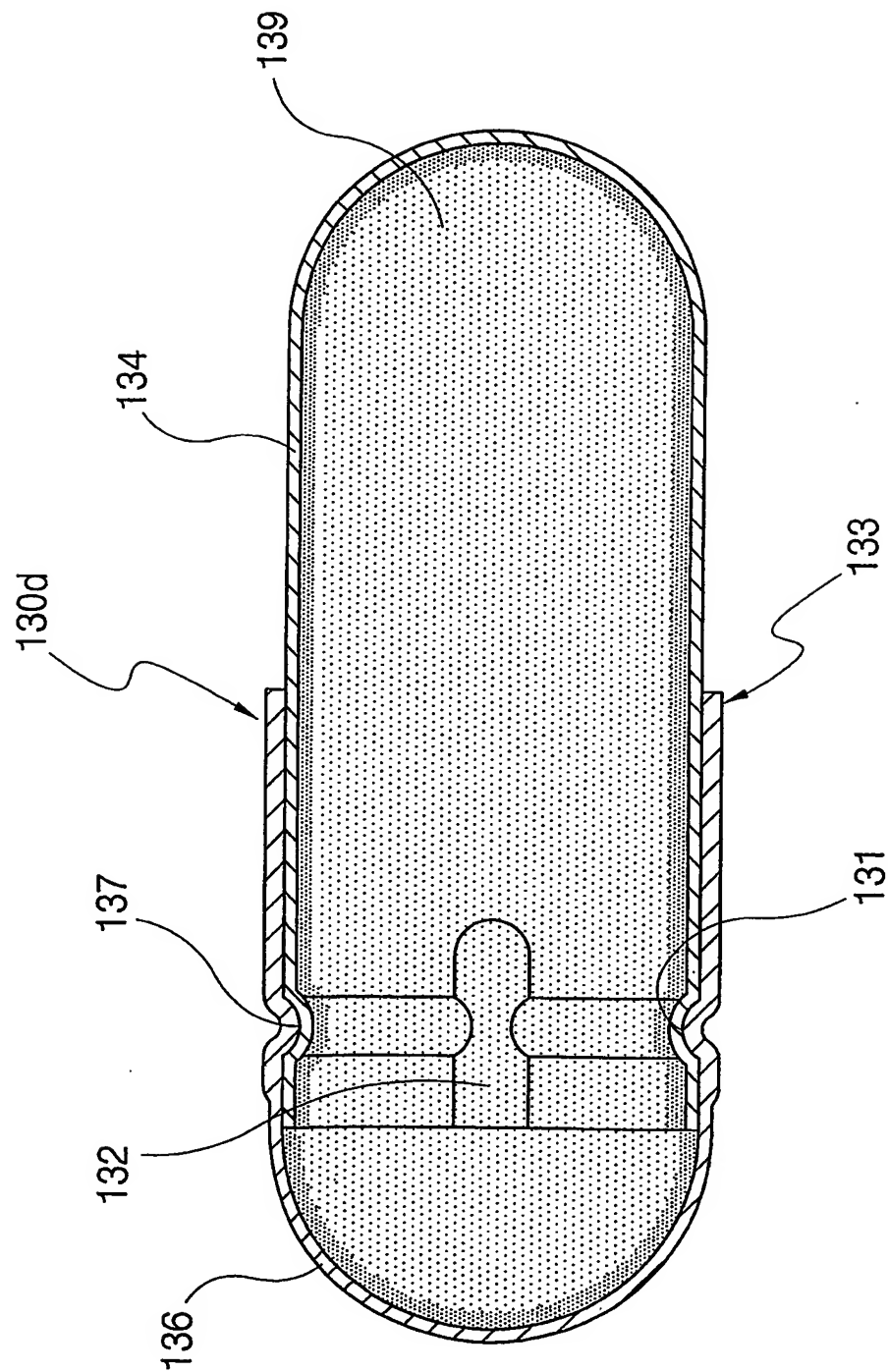
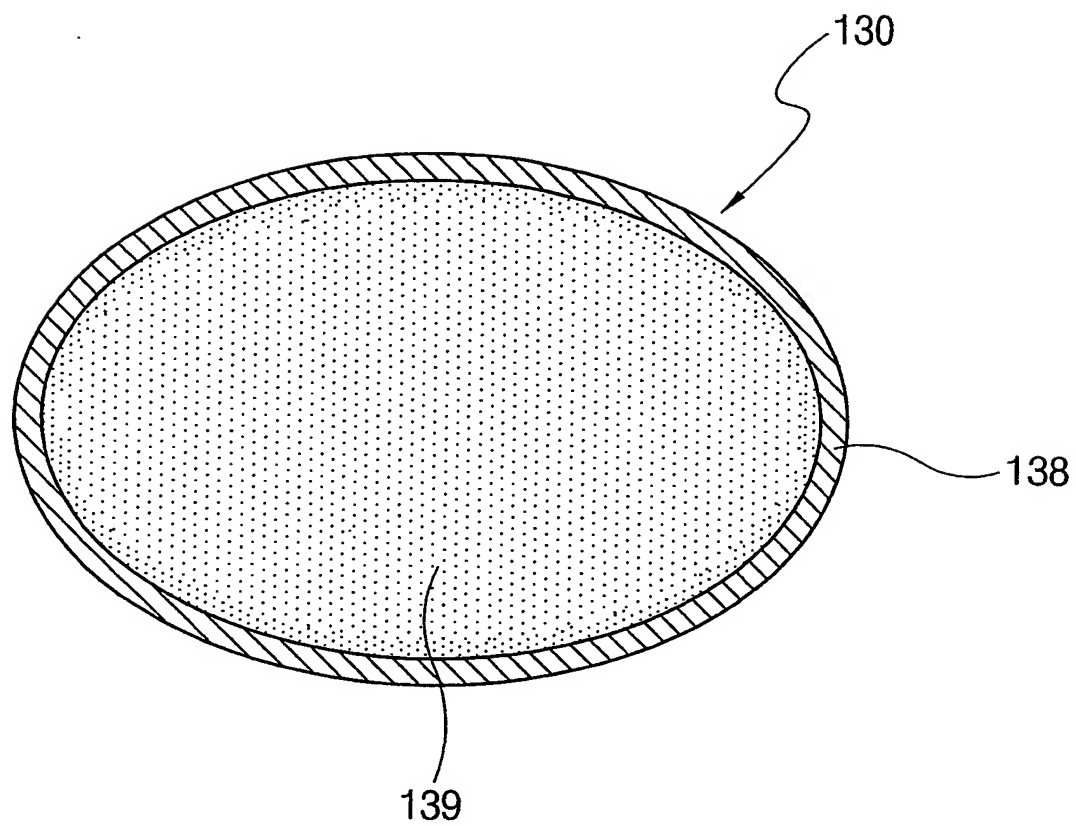


FIG. 9



INTERNATIONAL SEARCH REPORT

 International application No.
 PCT/KR01/01974
A. CLASSIFICATION OF SUBJECT MATTER

IPC7 A24D 3/14

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC7 A24D 3/00

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Korean Patents and applications for inventions since 1975

Korean Utility models and applications for Utility models since 1975

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

KIPASS "cigarette", "filter", "aroma or fragrance or odor", "capsule"

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X Y	KR 91-00142 B1 (JAPAN TOBACCO INC) 21 January 1991 see claims 1,3,4	1-5 6,7
X Y	JP 12-14377 A (HARADAHIROTSUGU) 18 January 2000 see the whole document	1-5 6,7
Y	KR 00-52283 A (JOO H. YANG) 16 August 2000 see claims	6
Y	KR 99-31274 A (YOUNG T. LEE) 06 May 1999 see claims	7
A	KR 00-25596 A (SUNG G. YANG) 06 May 2000 see the whole document	1-7
A	US 4941486 A (MICHAEL F. DUBE) 17 July 1990 see the whole document	1-7

☐ Further documents are listed in the continuation of Box C.☒ See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

24 APRIL 2002 (24.04.2002)

Date of mailing of the international search report

25 APRIL 2002 (25.04.2002)

Name and mailing address of the ISA/KR

Korean Intellectual Property Office
Government Complex-Daejeon, 920 Dunsan-dong, Seo-gu,
Daejeon Metropolitan City 302-701, Republic of Korea

Facsimile No. 82-42-472-7140

Authorized officer

KIM, Ji Hyeong

Telephone No. 82-42-481-5634



INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/KR01/01974

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
KR 91-00142 B1	21-01-91	JP 2709077 B2	04-02-98
		JP 1060363 A2	07-03-89
		HK 96696 A	14-06-96
		DE 3854281 T2	11-01-96
		DE 3854281 C0	14-09-95
		GR 3017096 T3	30-11-95
		EP 292949 B1	09-08-95
		EP 292949 A3	07-11-90
		EP 292949 A2	30-11-88
		PH 25732 A	18-10-91
		US 4889144 A	26-12-89
JP 12-14377 A	18-01-00	NONE	
KR 00-52283 A	16-08-00	NONE	
KR 99-31274 A	06-05-99	NONE	
KR 00-25596 A	06-05-00	NONE	
US 4941486 A	17-07-90	NONE	